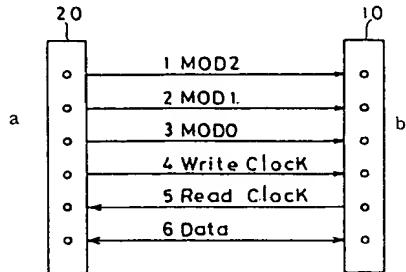


## (54) DRIVING INTERFACE

(11) 2-132514 (A) (43) 22.5.1990 (19) JP  
 (21) Appl. No. 64-172716 (22) 4.7.1989 (33) JP (31) 88p.166540 (32) 4.7.1988  
 (71) CANON INC (72) TAKAYUKI AIZAWA  
 (51) Int. Cl<sup>s</sup>. G06F3/06, G11B19/02

**PURPOSE:** To decrease the number of signal lines used for communication of data by using a data signal line used for transmission of the data signal between a driving device and a controller and a mode signal line used for transmission of the mode signal that identifies the type of the data to be transmitted.

**CONSTITUTION:** The drive interface signal lines set between an input/output terminal group 10 of the driving device side and an input/output terminal group 20 of the controller side include three mode signal lines 1 - 3, two clock signal lines 4 and 5, and a serial data signal line 6 capable of the bidirectional communication. The lines 1 - 3 transmit the mode signals to the driving device side from the controller side to define the data on the line 6. Thus the type of the data on the line 6 can be defined by decoding the signals 1 - 3 and the line 6 can be shared. As a result, the signal lines necessary for the data communication can be decreased down to six types only.



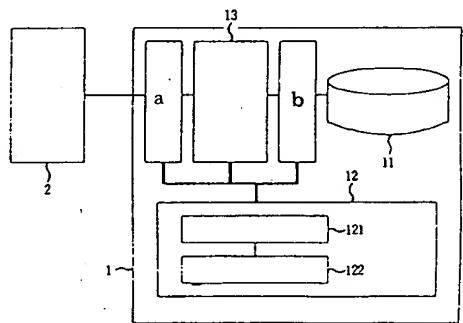
a: controller side, b: driving device side

## (54) PRE-READ CONTROL SYSTEM

(11) 2-132515 (A) (43) 22.5.1990 (19) JP  
 (21) Appl. No. 63-287062 (22) 14.11.1988  
 (71) FUJITSU LTD (72) SHUHEI MORIYOSHI  
 (51) Int. Cl<sup>s</sup>. G06F3/06

**PURPOSE:** To shorten the response time by deciding the interruption or the continuation of a pre-read process based on the identifying result of an access form when the switch of cylinders is required during a pre-read process.

**CONSTITUTION:** An address information store means 121 stores the address information on the read commands received in sequence from a host. An access form identifying means 122 identifies whether the commands received from the host indicate the sequential accesses or random accesses. Then it is decided whether a seek instruction is produced or a pre-read process is interrupted when the switch of cylinders is required during the pre-read process. As a result, the response has no delay to a command even with a random access. While the data requested by the host is always limited to the data stored in a data buffer in the case of a sequential access. Then the response time is shortened to the commands together with improvement of the performance in a pre-read control system.



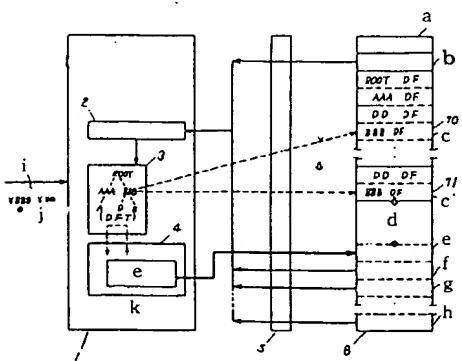
1: magnetic disk device, 2: host device, 11: disk medium, 12: control part, 13: data buffer, a: host device interface control circuit, b: disk control circuit

## (54) SYSTEM AND METHOD FOR WRITE ENABLE TYPE OPTICAL DISK CONTROLLING

(11) 2-132516 (A) (43) 22.5.1990 (19) JP  
 (21) Appl. No. 63-286177 (22) 11.11.1988  
 (71) MATSUSHITA ELECTRIC IND CO LTD (72) TADASHI MIKI(1)  
 (51) Int. Cl<sup>s</sup>. G06F3/08, G11B27/00

**PURPOSE:** To realize an updating operation with the reduced overhead by adding an updating means into an operating system to record again entirely a directory file and also to additionally record the history information on a directory file table set in a memory.

**CONSTITUTION:** An operating system 1 includes a directory file table reproduction means 2, a memory 3, and a directory file table updating means 4. The means 2 reproduces a direct file table into the memory 3 based on the history information. At the same time, the means 4 records the updating operation of a directory file table with a small quantity of history information. Thus it is possible to obtain a hierarchical directory control system which can use effectively the recording area of a write enable type optical disk with the reduced overhead of the updating operation.



5: optical disk controller, a: volume information, b: initial DFT, c: old, c': new, d: unused area, e: (n+1)-th history information, f: n-th history information, g: (n-1)-th history information, h: 1st history information, i: directory, j: production instruction, k: DFT update means